

**MWH**

MONTGOMERY WATSON HARZA

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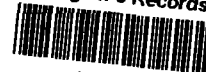
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JTPA
0434670016
MIKE C-70
SF/tech

11 March 2003

Mr. Les Bant
Engineer
Environmental Health Services
DuPage County Health Department
1111 East Jackson Street
Lombard, Illinois 60148

EPA Region 5 Records Ctr.



379024

Re: Final - Report of Monitoring Wells Sealing,
Former NIKE Missile Battery C-70, Naperville

FILE COPY

Dear Mr. Bant:

This letter report summarizes sealing of monitoring wells in accordance with the February 2003 "Work Plan and Site Specific Health and Safety Plan for Monitoring Well Abandonment at the Former NIKE Missile Battery C-70 Site, Naperville, DuPage County, Illinois. The work plan identified the methods for sealing of three monitoring wells, MW-11A, MW-12A, and MW-12B.

MW-11A is being abandoned because the filter pack above the well screen extends across a confining clay layer. MW-12A and MW-12B have been abandoned because the access agreement to their location has expired. Abandonment activities were conducted on February 6th and 7th, 2003, and witnessed by Mr. Mark Frueh, representing the United State Army Corps of Engineers, Louisville District (USACE). Total depth and location of the wells were verified before beginning abandonment activities. The drilling subcontractor for monitoring well abandonment was Midwest Engineering Services (MES), Oak Forest, Illinois. MWH geologist David Powers provided field oversight and documented the abandonment activities. Field activities were performed in accordance with the Final Work Plan and Site Specific Health and Safety Plan for Monitoring Well Abandonment (MWH, 04 February 2003), unless specifically noted below.

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Summary of Work Performed

REVIEWER MD

Monitoring Well MW-11A

The abandonment of MW-11A will be completed in two steps, first by grouting inside the existing PVC well riser and screen, then by overdrilling the PVC riser and existing annular space seal and filter pack to the mid-point of the clay layer, and grouting the overdrilled borehole.

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The first step was completed on February 7th, 2003 by grouting inside the PVC riser and screen to the top of the riser, inside the flush-mount protective cover. Twenty gallons of cement grout (95% Portland type I cement and 5% Quik Grout bentonite gel) were used to grout the riser and screen from the total depth of 66.2 feet below ground surface (bgs) to the top of the PVC riser. The work plan called for grouting MW-11A to a minimum depth of 47 feet bgs. However, because sufficient grout was mixed, and since the well will remain in place until overdrilling completes the abandonment, the well was sealed to the top of riser by using the available grout. The existing flush mount protective cover was left in place. In summer 2003, during anticipated Remedial Investigation field activities, the second step for abandonment of MW-11A will be completed according to the work plan. Overdrilling MW-11A to a depth of approximately 52 feet bgs, which corresponds to the middle of the clay layer, and then grouting the overdrilled borehole to the surface will complete the abandonment.

MW-12A and MW-12B

Both MW-12A and MW-12B were installed in a parking area. MW-12A was installed to a total depth of approximately 60.2 feet bgs, screened in the shallow unconsolidated aquifer. MW-12B was installed to a total depth of approximately 100.2 feet bgs, with the MW-12B screen and filter pack set entirely in the intermediate unconsolidated aquifer, below the confining clay layer. An 8-in. diameter steel surface casing is set to a depth of 72 feet bgs to seal off the upper aquifer at MW-12B. The work plan called for grouting within the PVC riser and screen for both wells, removing the above-ground protective casing and bumper posts from each well, and restoring the ground surface.

MW-12B Abandonment

Monitoring well MW-12B was abandoned on February 6th, 2003. However, when the tremie pipe was pulled up during the grouting process, the PVC riser and screen was dislodged. Therefore, the PVC riser and screen was entirely removed, and additional grout was placed by tremie pipe within the annular seal after removal of the PVC riser and screen. MW-12B was grouted from the total depth of 100.2 feet bgs to one foot bgs (the base of surface restoration) with 60 gallons of cement grout. The 8-in. steel protective casing for MW-12B (which extends to 72 feet bgs the confining clay layer, to isolate MW-12B from the shallow unconsolidated aquifer) was left in place after being cut off one foot below grade.

MW-12A Abandonment

Abandonment of MW-12A was started on February 6th and completed on February 7th. MW-12A was grouted within the PVC riser and screen from the total depth of 60.2 feet bgs to 38 feet bgs on February 6th and from 38 feet bgs to the top of the riser on February 7th. A total grout volume of 110 gallons was placed to abandon MW-12A. No settling of grout was observed in the interval before surface restoration at either well. The PVC riser at MW-12A was cut off 2 feet below grade after sealing with grout. The additional grout volumes are attributed to grout expanding into the coarse formation in which MW-12A was screened.

The aboveground protective covers and bumper posts at both MW-12A and MW-12B were removed. Coarse fill was replaced for surface restoration at both locations, topped with an asphalt patch. The restored surface will serve as the base course for future paving at the former MW-12A and MW-12B location.

Well Sealing Forms

Well Sealing Forms for MW-12A and MW-12B are attached.

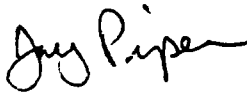
The Well Sealing Form for MW-11A will be submitted when abandonment of that well is completed by overdrilling in summer 2003.

MWH greatly appreciates your assistance in coordinating and planning activities at the Former NIKE Missile Battery C-70 Site in Naperville, Illinois (NIKE C-70).

Please do not hesitate to call me at (630) 836-8913, or Vivek Agrawal (630) 836-8920 if you have any questions about the monitoring well abandonment activities or the attached documentation.

Sincerely,

MWH Americas, Inc.



Jay Piper, P.G.
Project Hydrogeologist

Enclosures: Well Sealing Forms

cc: Ms. Melody Thompson – USACE
Mr. Doug Buchanan – USACE
Mr. Don Peterson – USACE
Mr. Paul Lake – IEPA

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ILLINOIS DEPARTMENT OF PUBLIC HEALTH
DIVISION OF ENVIRONMENTAL HEALTH
525 W. JEFFERSON ST.
SPRINGFIELD, IL 62761

WATER WELL SEALING FORM

RETURN ALL COPIES TO IDPH OR
LOCAL HEALTH DEPARTMENT

TYPE OR PRESS FIRMLY

This form shall be submitted to this Department or the local health department not more than 30 days after a water well, boring or monitoring well is sealed. Such wells are to be sealed not more than 30 days after they are abandoned in accordance with the sealing requirements in the Water Well Construction Code. **THE LOCAL HEALTH DEPARTMENT OR REGIONAL PUBLIC HEALTH DEPARTMENT MUST BE NOTIFIED AT LEAST 48 HOURS PRIOR TO SEALING.**

1. Ownership (Name of Controlling Party) UNITED STATES ARMY CORP OF ENGINEERS (USACE)
2. Well Location MW-12A 1770 PARK STREET NAPERVILLE DUPAGE
Address - Lot Number City County
General Description Township 38 (N) Range 9 (E) Section 01
SW Quarter of the SE Quarter of the SE Quarter
3. Year Drilled 2001
4. Drilling Permit Number (and date, if known) NA
5. Type of Well Bored _____ Drilled X Other _____
6. Total Depth 60.20' Diameter (inches) 2.0"
7. Formation clear of obstruction X Yes _____ No _____
8. DETAILS OF PLUGGING
Filled with NEAT CEMENT / BENTONITE GROUT from 0 to 60.20 ft.
(cement or other materials)
Kind of plug _____ from _____ to _____ ft.
Filled with _____ from _____ to _____ ft.
Kind of plug _____ from _____ to _____ ft.
Filled with _____ from _____ to _____ ft.
Kind of plug _____ from _____ to _____ ft.
9. CASING RECORD Upper 2 feet of casing removed X Yes _____ No _____
10. Date well was sealed Month 02 Day 06 Year 03
11. Licensed water well driller or other person approved by the Department performing well sealing.

MIDWEST ENGINEERING SERVICES, INC
Name

Complete License Number

4243 W 166TH STREET
Address

OAK FOREST
City

IL 60456
State/ZIP

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1. Ownership (Name of Controlling Party) UNITED STATES ARMY CORP OF ENGINEERS (USACE)

2. Well Location MW-128 1770 PARK STREET NAPERVILLE DUPAGE
Address - Lot Number City County

General Description Township 38 (N) Range 9 (E) Section 01
SW Quarter of the SE Quarter of the SE Quarter

3. Year Drilled 2001

4. Drilling Permit Number (and date, if known) NA

5. Type of Well Bored _____ Drilled X Other _____

6. Total Depth 100.20' Diameter (inches) 2.0"

7. Formation clear of obstruction X Yes _____ No

8. DETAILS OF PLUGGING

Filled with NEAT CEMENT/BENTONITE GROUT from 0 to 100.20 ft.
(cement or other materials)

Kind of plug _____ from _____ to _____ ft.

Filled with _____ from _____ to _____ ft.

Kind of plug _____ from _____ to _____ ft.

Filled with _____ from _____ to _____ ft.

Kind of plug _____ from _____ to _____ ft.

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